

33. NEW RECORDS OF PLANTS FROM ANDAMAN AND NICOBAR ISLANDS

The vegetation of Katchal Island in Andaman and Nicobar Islands has been poorly studied. S. Kurz in his paper on "A sketch of the vegetation of Nicobar Islands" (*J. As. Soc. Beng.* 45 (3): 105-164. 1876) lists several species from Katchal island. Apart from Kurz there is no other published paper on the flora of Katchal. Since the establishment of the Regional Circle of the Botanical Survey of India at Port Blair, intensive survey of Katchal island yielded several species which are new records for Andaman and Nicobar Islands. The enumeration list includes 13 species, of which 6 species are new records for India and 7 species are new records for Andaman and Nicobar Islands.

MENISPERMACEAE

1. **Fibraurea tinctoria** Lour. Fl. Cochinch. 2: 709. 1790; Hook. f. Fl. Brit. India 1: 98. 1872.

Woody liana; bark peeling off in flakes. Leaves alternate, ovate, entire, 9.5-16 cm long, 8-10.5 cm wide, subcoriaceous, glabrous, strongly 3-nerved; lateral nerves on midrib 2-3 pairs; petiole 5.5-8.5 cm long, swollen at base and above, longitudinally grooved. Inflorescence \pm 24 cm long, usually from the old stems in paniculate racemes; flowers solitary, \pm 2.5 mm long, \pm 2.5 mm across, pale yellow in colour; pedicel \pm 2 mm long; bract minute at the base of pedicel; bracteole minute at the base of calyx and appearing as 4th sepal; sepals 3, free, unequal, less than 1 mm across; petals 6, valvate, free, oblong, obtuse, \pm 2.5 mm long, 1.5 mm wide; stamens 6; anthers sessile, arising from one point on thalamus, oblong, \pm 2.5 mm long, \pm 0.5 mm wide, dehiscent by terminal pore. Fruit ob-

long, ellipsoid, \pm 3 cm long, \pm 1.8 cm thick; pericarp fleshy; endocarp woody, grooved on one side; seed solitary, longitudinally grooved on one side, \pm 2.5 cm long, \pm 1.5 cm thick, yellow.

Katchal Island: Mildera, 29 April 1974, Chakraborty 1231 (PBL).

Distribution: Indo-China, Malaysia, Philippines & Borneo. A new record for India.

VIOLACEAE

2. **Rinorea longiracemosa** (Kurz) Craib, Fl. Siam. 1: 90. 1925; Jacobs & Moore in Fl. Males. I, 7: 189. 1971. *Alsodeia longiracemosa* Kurz in J. As. Soc. Beng. 39 (2): 63. 1870.

Tree, \pm 15 m tall. Leaves elliptic to oblong-lanceolate. *Racemes* slender, solitary, 8-13 cm long; flowers small, greenish white. Capsules and seeds glabrous.

Katchal Island: Kapanga, 15 April 1975, Chakraborty 2548 (PBL).

Distribution: Burma, Indo-China, Thailand, Malaysia, Sumatra, Java. A new record for India.

3. **Rinorea macrophylla** (Decne) O. Ktze. Rev. Gen. Pl. 1: 42. 1891; Jacobs in Blumea 15. 135. 1967; Jacobs & Moore in Fl. Males. I, 7: 190. 1971. *Alsodeia macrophylla* Decne, Ann. Mus. Hist. Nat. Paris 3: 468, t. 9. 1834. *Rinorea horsfieldii* Miq. Fl. Ind. Bat. 1, 2: 117. 1859; Backer & Bakh. f. Fl. Java. 1: 195. 1963.

Shrub, \pm 2 m tall. Leaves obovate, ellipsoid-oblong, 8-20 cm long, 4-9 cm wide. Inflorescence fasciculiform, many-flowered; ovary pubescent. Capsule trigonous-globose.

Katchal Island: Mildera, 12 Nov. 76, Chakraborty 4659 (PBL).

MISCELLANEOUS NOTES

Distribution: Siam, Malay peninsula, Sumatra, Java, Philippines. A new record for India.

BURSERACEAE

4. **Dacryodes rugosa** (Bl.) H. J. Lam. *Jard. Bot. Btzg.* 42: 203, t. 11, ff. 64. 1932; Leenhouts, in *Fl. Males. I*, 5: 221. 1956. *Sanitra rugosa* Bl. *Mus. Bot.* 1: 212. 1850.

Tree, ± 6 m. tall. Leaves compound, bipinnate, chartaceous; leaflets, 3-4 pairs, lower leaflets smaller, the upper ones larger, oblong-lanceolate, unequal at base, abruptly acuminate at apex, 8-14 cm long, 3-8 cm broad; acumen ± 1.5 cm long, ± 0.4 cm broad; midrib slightly raised above, prominent beneath; lateral nerves 13-16 pairs, slightly curved, glabrous; petiolules thickened at both ends, 1.0-1.5 mm thick. Fruiting peduncle patently pubescent; fruit an indehiscent drupe, ovoid, slightly pointed at apex, pink in colour, slightly oblique, ± 2.5 cm long, ± 2 cm thick; rugose when dry.

Katchal Island: Mildera, 29 April 1974, *Chakraborty* 1219 (PBL).

The specimens collected are in fruit and has been identified at Leiden herbarium. Detailed description of the species is given by Leenhouts (l.c.).

Distribution: Malaysia, Sumatra, W. Java and Borneo. A new record for India.

CUCURBITACEAE

5. **Cucumis callosus** (Rottl.) Cogn. in Engler, *Pflanzenr.* 88: 129. 1924. *Bryonia callosa* ('collosa') Rottl., *Neue Schrift. Gen. Nat. Freunde Zu Berlin* 4: 210. 1803. *Cucumis trigonous* Roxb. *Fl. Ind.* 2: 722. 1824; Clarke in Hook. f. *Fl. Brit. India* 2: 619. 1829. (excl. syn.); *Chakraborty* in *Ind. Journ. Agric. Sc.* 16 (1): 51. 1946.

Prostrate trailing herb or climber; stem slender, angular; not much branched; tendrils simple. Leaves sub-orbicular, 7-lobed, cordate at base, obtuse at apex, slightly broader than long, 2-2.8 cm long, 2.5-3.5 cm broad; petiole slender, 1.2-3.5 cm long, hispid. *Flowers* unisexual, yellow; male flowers in groups at 2-3, ± 10 mm long, ± 4 mm across; pedicels slender, ± 2.5 mm long; calyx-tube narrow, campanulate, villous, ± 3 mm long; lobes 5, subulate, ± 1.5 mm long; corolla campanulate, 5-lobed; lobes oblong-ovate, acute ± 6 mm long, ± 3 mm across; stamens 3, inserted on the calyx-tube; filament short, free; anther oblong, 5-grooved, ± 2 mm long; connective less than 1 mm long; pistillode ± 0.5 mm long. Fruit obovoid, puberulous, ± 3 cm long, ± 2.5 cm across; seeds white, oblong with acute apex, ± 4 mm long, ± 2 mm broad, less than 1 mm thick.

Katchal Island: Kapanga, 22 Aug. 1974, *Chakraborty* 2163 (PBL).

Distribution: N. Africa, Peninsular, Central and Northern India, West Bengal, Malaya, Australia, China. A new record for Andaman and Nicobar Islands.

RUBIACEAE

6. **Randia curvata** Valet. in *Ic. Bogor.* 2: t. 146. 1903-1906; Back & Bakh. f. *Flora of Java* 2: 310. 1965.

Liana; leaves ovate, ovate-oblong to elliptic; thorn deflexed; cymes terminal; fruit globose, ± 20 mm across.

Katchal Island: Hill towards jetty, E. Bay, 20 Dec. 74, *Chakraborty* 2221 (PBL).

Distribution: Java. A new record for India.

SYMPLOCCACEAE

7. **Symplocos microtricha** Hand-Mazz. in *Beih. Bot. Centralbl.* 62-B; 17. 1943, Nootboom, *Rev. Symplocaceae* 239. 1975.

Shrub \pm 2 m. tall; leaves elliptic to obovate, \pm 10 cm long, 3.5 cm wide; nerves 8-10 pairs; fruit ovoid, constricted towards the apex, \pm 8 mm long, \pm 4 mm thick.

Katchal Island: W. Bay, in inland forests, 13 Feb. 77, *Chakraborty* 5204.

Distribution: Indo-China, China and Malay peninsula. A new record for India.

OLEACEAE

8. **Myxopyrum smilacifolium** Bl. Mus. Bot. 1: 320. 1850; Kurz, For. Fl. Burma 2: 160. 1877; Clarke in Hook. f. Fl. Brit. India 3: 618. 1882.

Climber, stem quadrangular; leaves 14-18 cm long, 8-10 cm wide; inflorescence a panicle; fruit globose.

Katchal Island: Mildera, 7 May 1975, *Chakraborty* 2527 (PBL).

Distribution: Assam, Cachar, Chittagong, Pegu, Penang, Malaya. A new record for Andaman and Nicobar Islands.

APOCYNACEAE

9. **Hunteria corymbosa** Roxb. Fl. Ind. 1: 695. Hook. f. Fl. Brit. India, 3: 637. 1882; Ridley, Fl. Malay Peninsula 2: 335, 1923.

Tree, \pm 5 m tall; leaves oblanceolate; nerves fine, 20-25 pairs; corymbs 3-5 cm long; corolla white; berries globose, beaked, yellow.

Katchal Island: Kapanga, roadside, 2 Nov. 76, *Chakraborty* 4602. (PBL).

Distribution: India, Sri Lanka, Sumatra. A new record for Andaman and Nicobar Islands.

AMARANTHACEAE

10. **Alternanthera sessilis** (L.) R. Br. ex R. & S. var. **tenuissima** (Suess.) Backer in Fl. Males, I, 4: 93. 1949. *Alternanthera tenuissima* Suess. in Bot. Arch. 39: 382. 1939.

Leaves from a narrowed base, filiform, shortly mucronate, 2-6 cm long, \pm 0.5 cm wide.

Katchal Island: Kadoo village, W. Bay, 1 May 1977, *Chakraborty* 5547 (PBL).

Distribution: Malaysia and New Guinea. A new record for India.

ZINGIBERACEAE

11. **Zingiber aromaticum** Roxb. Fl. Ind. 1: 45, 1824, Backer in Hook. f. Fl. Brit. India, 6: 240. 1892.

Spike globose; lip pale yellow; anther crest large; capsule \pm 2.5 cm long, oblong, trigonous.

Katchal Island: Kapanga, coastal, 28 August 74, *Chakraborty* 2108 (PBL).

Distribution: Sikkim, N. Bengal, Meghalaya, Bangladesh. A new record for Andaman and Nicobar Islands.

COMMELINACEAE

12. **Pollia sorzogonensis** (E. Meyer) Endl. Gen. Pl. 14: 1029. 1840; Hook. f. Fl. Brit. India 6: 367. 1892. *Aclisia sorzogonensis* E. Meyer in Presl. Rel. Haenk. 1: 138, t. 25. 1827.

Stem erect, viscid; leaves 15-25 cm long, shortly petioled; peduncle villous with deflexed hairs.

Katchal Island: Mildera, 10 August 74, *Chakraborty* 2023 (PBL).

Distribution: Sikkim, Bhutan, Burma, Malacca, Sri Lanka. A new record for Andaman and Nicobar Islands.

COMMELINACEAE

13. **Aneilema vaginatum** (L.) R. Br. Prodr. 271. 1810; Hook. f. Fl. Brit. India 4: 381. 1892. *Commelina vaginata* L. Mant. 177. 1771.

Roots fibrous; stem decumbent, rooting at nodes; flowers 1-3 pedicelled; stamens 2, fertile; staminodes 2; capsule cuspidate; seeds.

Katchal Island: Delhi village, W. Bay, 13 June 77, *Chakraborty* 6028 (PBL).

Distribution: Sri Lanka, Peninsular India, Bengal, Burma. A new record for Andaman and Nicobar Islands.

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PARITOSH CHAKRABORTY

34. FILAMENTOUS MYXOPHYCEAE OF AURANGABAD DISTRICT, MAHARASHTRA

Between September 1975 and June 1977, about fifteen hundred vials of algae have been collected from a number of places in Aurangabad district in Marathwada division of Maharashtra state. The rainfall of Aurangabad district varies from 50 to 150 cm. The temperature varies from 9°C in December to 41°C in May. The pH of the water of the collection spots was determined by using B.D.H. universal indicator. The pH is mentioned in brackets immediately after the collection spots in the habitats. Camera lucida diagrams of all the algae have been drawn and preserved.

In this paper forty five taxa belonging to eleven genera of the filamentous algae have been recorded. Of these only five taxa have been earlier recorded from Aurangabad proper by Kamat (1974),¹ however, the localities mentioned by Kamat are different from the ones recorded here. The remaining forty algae are additions to the flora of Aurangabad district.

Spirulina laxissima West, G.S.

In blue green mucilaginous masses in a tap water culture (8.5), Institute of Science Laboratory, Aurangabad (28-10-75).

Spirulina major Kuetz. ex Gomont

Blue greenish masses submerged in a stream (9.5), Aurangabad (6-11-75).

Oscillatoria annae van Goor

Greenish brown masses forming thin layers on moist soils near Harsool talao, Aurangabad (11-10-75).

Oscillatoria biswasii Kamat

Bluish green mucilaginous masses along with a thin layer of soil floating and submerged in a small pool, Aurangabad (11-10-75).

Oscillatoria chalybea (Mertens) Gomont

Abundant in a pool (8.5), Khokadpura, Aurangabad (1-10-75). In oxidation pond (9), near Kanchanwadi (19-10-75).

Trichomes are slightly narrower than those of the type.

Oscillatoria cortiana Meneghini ex Gomont v. minor Kamat

Bluish green masses adhering to the Cyperaceae members in oxidation pond (10.5) near Kanchanwadi (10-10-75).

¹ KAMAT, N. D. (1974): Algae of Marathwada, Maharashtra. *Phykos* 13: 22-32.